

What is claimed is:

1. A disc drive assembly, comprising:
- a base deck;
 - a spindle motor mounted to the base deck;
 - a disc mounted to the spindle motor for rotation about a vertical axis, the disc
 - 5 having an inner radius and an outer radius;
 - an actuator assembly mounted to the base deck adjacent the disc and
 - controllably rotatable with respect to the disc;
 - a snubber adjacent the disc, the snubber comprising:
 - a body portion rigidly affixed with respect to the vertical axis of the
 - 10 disc; and
 - snubber arms connected to the body portion, the snubber arms
 - extending from the body portion towards the disc and above and
 - below the elevation of the disc, each snubber arm having a distal
 - end located at a position adjacent the disc between the inner and
 - 15 the outer radii of the disc and towards the outer radius of the
 - disc, wherein the heights of the snubber arms limit deflection of
 - the disc at the outer radius of the disc as a result of mechanical
 - shock forces applied to the disc drive assembly, minimizing
 - damage to the disc assembly.

2. The disc drive assembly of claim 1, wherein the snubber is further characterized as cylindrically-shaped, wherein the body portion includes a central hole through which a fastener extends to secure the body portion to the base deck and wherein the snubber arms extend circumferentially about the body portion.

3. The disc drive assembly of claim 1, wherein the snubber is further characterized as L-shaped, wherein the body portion comprises a vertical portion and a horizontal portion, the horizontal portion including a hole through which a fastener extends to secure the body portion to the base deck and wherein the snubber arms
5 extend from the vertical portion.

4. The disc drive assembly of claim 1, wherein the base deck comprises a disc shroud extending from the base deck proximate to a portion of the outer radius of the disc, and wherein the snubber is mounted to an end of the shroud, the snubber characterized as wrapping around the end of the shroud and comprising fasteners for
5 fastening the snubber to the shroud and to the base deck.

5. The disc drive assembly of claim 1, wherein the actuator assembly includes actuator arms that extend above and below the disc, and wherein the snubber is integrally formed with the actuator assembly so that the snubber arms are adjacent the actuator arms.

6. The disc assembly of claim 5, wherein the snubber is mounted to the actuator assembly by way of a fastener.

7. The disc drive assembly of claim 5, wherein the snubber is characterized as an over-molded snubber formed from an over-molding process wherein material is deposited upon the actuator arms in selected locations defining the snubber.

8. The disc drive assembly of claim 5, wherein the snubber comprises pins inserted through corresponding holes in the actuator arms.

9. The disc drive assembly of claim 5, further comprising a flex circuit assembly connected to the actuator assembly, and wherein the snubber is characterized as comprising flex extensions adjacent to the actuator arms, the flex extensions extending from the flex circuit assembly.

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10. A disc drive assembly, comprising:

a base deck;

a spindle motor mounted to the base deck;

a disc mounted to the spindle motor for rotation about a vertical axis, the disc

5 having an inner radius and an outer radius;

a snubber adjacent the disc, the snubber comprising:

a body portion mounted to the base deck; and

snubber arms connected to the body portion, the snubber arms

10 extending from the body portion towards the disc and above and below the elevation of the disc, each snubber arm having a distal

end located at a position adjacent the disc between the inner and

the outer radii of the disc and towards the outer radius of the

15 disc, wherein the heights of the snubber arms limit deflection of

the disc at the outer radius of the disc as a result of mechanical

shock forces supplied to the disc drive assembly.

11. The disc drive assembly of claim 10, wherein the snubber is further characterized as cylindrically-shaped, wherein the body portion includes a central hole through which a fastener extends to secure the body portion to the base deck and wherein the snubber arms extend circumferentially about at least a portion of the body

5 portion.

13. A disc drive assembly, comprising:

a base deck;

a spindle motor mounted to the base deck;

a disc mounted to the spindle motor for rotation about a vertical axis, the disc

5 having an inner radius and an outer radius;

an actuator assembly mounted to the base deck adjacent the disc and

controllably rotatable with respect to the disc, the actuator assembly

including:

actuator arms extending radially towards the disc and located above and

10 below the disc;

limiting means, adjacent the actuator arms, for limiting the vertical

deflection of the disc from a mechanical shock to the disc drive,

the limiting means extending above and below the elevation of

the disc between the inner and the outer radii of the disc and

15 towards the outer radius of the disc, the limiting means having a

vertical dimension greater than the vertical dimension of the

actuator arms.

14. The disc drive assembly of claim 13, wherein the limiting means is
mounted to the actuator assembly by way of a fastener.

15. ~~The disc drive assembly of claim 13, wherein the limiting means is~~

16. The disc drive assembly comprises pins inserted through the disc drive assembly connected to the pins, characterized as comprising a plurality of extensions extending from the disc drive assembly.

~~16. The disc
comprises pins inserted~~

17. The disc drive assembly connected to the characterized as comprising tensions extending from

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	